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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,082	07/30/2003	Hea-Chun Lee	21C-0056	2199

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CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002

EXAMINER

HAN, JASON

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/632,082	Applicant(s) LEE ET AL.	
	Examiner Jason M. Han	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 14-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 29-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 22, 2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to Claims 1-13 and 29-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-9, 11-13, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazis (U.S. Patent 4504891) in view of Saito (U.S. Patent 6441874).
4. With regard to Claims 1 and 6, Mazis discloses a lamp assembly including:
- At least two lamps inherently installed into sockets, whereby the lamps being of a fluorescent bulb type [Column 2, Lines 13-16], which are commonly known in the art and inherently provide a fluorescent layer formed on an inner

surface of the lamp body, a discharge gas disposed in the body, first and second electrodes for providing the lamp body with discharge voltages;

- A first lamp holder [Figures 1-4: (33)], whereby a first end portion of the lamp is inserted into and fastened to the first lamp holder; and
- A first board [Figures 1-4: (44)] that makes contact with the first lamp holder, whereby the first board has a flat plate shape, and is coupled to the first electrode to provide the first electrode with a first discharge voltage.

Mazis does not specifically teach the first lamp holder having a pipe shape (re: Claim 1), nor comprising of rubber (re: Claim 6).

Saito teaches a lamp holder [Figures 1-7: (9)] having a pipe-shape and comprising of rubber [Column 5, Lines 12-16].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Mazis to incorporate the pipe-shaped lamp holder of Saito to provide greater security to the fluorescent lamps, as well as prevent luminance drop via suppressing heat radiation at the electrode portions of the fluorescent lamps so as to secure sufficient amount of mercuric vapor in the whole of said lamps [see Saito: Abstract].

5. With regards to Claim 2, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the first board including:

- A first insulated body [Figure 3: (44); inherent]
- At least one first conductive pattern [Figure 3: (45)] electrically connected to the first electrode of each of the lamps; and

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- At least two first through-holes [Figure 3: (46)] formed on the first insulated body, whereby each of the first through-holes receives the first electrode of each of the lamps.

6. With regards to Claim 3, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the lamp assembly including:

- A first connector [Figure 4: (40)] installed on the first conductive pattern; and
- A first terminal [Figures 3-4: (38, 39)], coupled to the first conductive pattern through the first connector, for receiving the first discharge voltage.

7. With regards to Claim 5, Mazis in view of Saito discloses the claimed invention as cited above, but does not specifically teach the first electrode being received in each of the first through-holes and the first conductive pattern being soldered with each other and electrically connected to each other.

However, Mazis teaches, "In addition, the assembly includes a pair of ballast transformers with their own wires, and the wires of all of these various components must be interconnected by means of wire nuts, solder connections, or quick-wire connections [Column 1, Lines 24-28."

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Mazis in view of Saito to incorporate the solder connections between the first electrode and first conductive pattern, so as to provide further support and prevent the electrode from moving within the assembly.

8. With regards to Claim 7, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches a second board [Figure 1: on side of (24)],

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coupled to the second electrode for providing the second electrode with a second discharge voltage.

9. With regards to Claim 8, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the second board [Column 3, Lines 2-7] including:

- A second insulated body [Figure 3: (44); inherent]
- At least one second conductive pattern [Figure 3: (45)] electrically connected to the second electrode of each of the lamps; and
- At least two second through-holes [Figure 3: (46)] formed on the second insulated body, whereby each of the second through-holes receives the second electrode of each of the lamps.

10. With regards to Claim 9, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the lamp assembly [Column 3, Lines 2-7] including:

- A second connector [Figure 4: (40)] installed on the second conductive pattern; and
- A second terminal [Figures 3-4: (38, 39)], coupled to the second conductive pattern through the second connector, for receiving the second discharge voltage.

11. With regards to Claim 11, Mazis in view of Saito discloses the claimed invention as cited above, but does not specifically teach the second electrode being received in

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each of the second through-holes and the second conductive pattern being soldered with each other and electrically connected to each other.

However, Mazis teaches, "In addition, the assembly includes a pair of ballast transformers with their own wires, and the wires of all of these various components must be interconnected by means of wire nuts, solder connections, or quick-wire connections [Column 1, Lines 24-28."

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Mazis in view of Saito to incorporate the solder connections between the second electrode and second conductive pattern, so as to provide further support and prevent the electrode from moving within the assembly.

12. With regards to Claim 12, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches a second lamp holder [Figures 2-3: (33 or 37); Column 3, Lines 2-7], whereby a second end portion of the lamp is inserted into and fastened to the second lamp holder.

Mazis does not specifically teach the second lamp holder having a pipe shape, nor comprising of rubber.

Saito teaches a lamp holder [Figures 1-7: (9)] having a pipe-shape and comprising of rubber [Column 5, Lines 12-16].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the second lamp holder of Mazis to incorporate the pipe-shaped lamp holder of Saito to provide greater security to the fluorescent lamps, as well as prevent luminance drop via suppressing heat radiation at the electrode portions of the

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fluorescent lamps so as to secure sufficient amount of mercuric vapor in the whole of said lamps [see Saito: Abstract].

13. With regards to Claim 13, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the number of lamps being four [Figure 2].

14. With regards to Claim 35, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the first board being disposed such that a planar surface of the first board [Figure 3: (44)] is substantially perpendicular to a longitudinal direction of each of the lamps.

15. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazis (U.S. Patent 4504891) in view of Saito (U.S. Patent 6441874) as applied to Claims 3 and 9, respectively above, and further in view of Park (U.S. Patent 6050704).

Mazis in view of Saito discloses the claimed invention as cited above, but does not specifically teach the first (second) terminal being connected to an inverter for generating the first (second) discharge voltage.

Park teaches such an inverter [Figure 1A: (16)] for providing voltage for illuminating a lamp [Figure 1A: (11); Column 1, Lines 66-67].

It is obvious that one ordinarily skilled in the art at the time of invention could have modified the lamp assembly of Mazis in view of Saito to incorporate the inverter of Park, which is commonly known within the art to provide power to a fluorescent lamp via changing direct-current power to alternating-current power.

16. Claims 29-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazis (U.S. Patent 4504891) in view of Saito (U.S. Patent 6441874).

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17. With regard to Claims 29 and 33, Mazis discloses a lamp assembly including:

- At least two lamps inherently installed into sockets, whereby the lamps being of a fluorescent bulb type [Column 2, Lines 13-16], which are commonly known in the art and inherently provide a fluorescent layer formed on an inner surface of the lamp body, a discharge gas disposed in the body, and first and second electrodes for providing the lamp body with discharge voltages;
- A first lamp holder [Figures 1-4: (33)], whereby a first end portion of the lamp is inserted into and fastened to the first lamp holder; and
- A first board [Figures 1-4: (44)] that makes contact with the first lamp holder and is electrically coupled to the first electrode such that the first end portion of the lamp body is spaced apart from the first board [note Figures 2-3 and how (33) is elevated/spaced apart from the board (44)], whereby the first board further includes:
 - = An insulated body [Figure 3: (44); inherent];
 - = At least one conductive pattern [Figure 3: (45)] formed on the insulated body and electrically connected to the first electrode of each of the lamps; and
 - = At least two through-holes [Figure 3: (46)] formed on the insulated body, whereby each of the through-holes receives the first electrode of each of the lamps.

Mazis does not specifically teach the first lamp holder having a pipe shape (re: Claim 29), nor comprising of rubber (re: Claim 33).

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Saito teaches a lamp holder [Figures 1-7: (9)] having a pipe-shape and comprising of rubber [Column 5, Lines 12-16].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Mazis to incorporate the pipe-shaped lamp holder of Saito to provide greater security to the fluorescent lamps, as well as prevent luminance drop via suppressing heat radiation at the electrode portions of the fluorescent lamps so as to secure sufficient amount of mercuric vapor in the whole of said lamps [see Saito: Abstract].

18. With regards to Claim 30, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the lamp assembly including:

- A connector [Figure 4: (40)] installed on the conductive pattern; and
- A terminal [Figures 3-4: (38, 39)], coupled to the conductive pattern through the connector, for receiving the first discharge voltage.

19. With regards to Claim 32, Mazis in view of Saito discloses the claimed invention as cited above, but does not specifically teach the first electrode being received in each of the through-holes and the conductive pattern being soldered with each other and electrically connected to each other.

However, Mazis teaches, "In addition, the assembly includes a pair of ballast transformers with their own wires, and the wires of all of these various components must be interconnected by means of wire nuts, solder connections, or quick-wire connections [Column 1, Lines 24-28."

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Mazis in view of Saito to incorporate the solder connections between the first electrode and conductive pattern, so as to provide further support and prevent the electrode from moving within the assembly.

20. With regards to Claim 34, Mazis in view of Saito discloses the claimed invention as cited above. In addition, Mazis teaches the lamp assembly including a second board [Figure 1: on the side of (24)] coupled to the second electrode and a second lamp holder [Figures 2-3: (33 or 37); Column 3, Lines 2-7], whereby the second board and the second lamp holder have identical shape with the first board and the first lamp holder respectively [Figure 1: (23, 24); Column 3, Lines 2-7].

21. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mazis (U.S. Patent 4504891) in view of Saito (U.S. Patent 6441874) as applied to Claim 30, and further in view of Park (U.S. Patent 6050704).

Mazis in view of Saito discloses the claimed invention as cited above, but does not specifically teach the terminal being connected to an inverter for generating the first discharge voltage.

Park teaches such an inverter [Figure 1A: (16)] for providing voltage for illuminating a lamp [Figure 1A: (11); Column 1, Lines 66-67].

It is obvious that one ordinarily skilled in the art at the time of invention could have modified the lamp assembly of Mazis in view of Saito to incorporate the inverter of Park, which is commonly known within the art to provide power to a fluorescent lamp via changing direct-current power to alternating-current power.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (11/29/2005)


Stephen Husar
Primary Examiner